

SEQUENCE LISTING

<110> BLEDSOE, RANDY K LAMBERT, MILLARD H MONTANA, VALERIE G STEWART, EUGENE L XU, H. ERIC

<120> METHOD FOR IDENTIFYING A GLUCOCORTICOID
 RECEPTOR MODULATOR USING THE STRUCTURE OF A GLUCOCORTICOID
 RECEPTOR LIGAND BINDING DOMAIN (TITLE AS AMENDED)

<130> PU4803 US <140> US 10/600,751 <141> 2003-06-20 <150> US 60/390,610 <151> 2002-06-21 <160> 14 <170> FastSEQ for Windows Version 4.0 <210> 1 <211> 2334 <212> DNA <213> Homo Sapiens <220> <221> CDS <222> (1)...(2334) <400> 1 atg gac tcc aaa gaa tca tta act cct ggt aga gaa gaa aac ccc agc Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Ser agt gtg ctt gct cag gag agg gga gat gtg atg gac ttc tat aaa acc Ser Val Leu Ala Gln Glu Arg Gly Asp Val Met Asp Phe Tyr Lys Thr cta aga gga ggt act gtg aag gtt tet geg tet tea eec tea etg 144 Leu Arg Gly Gly Ala Thr Val Lys Val Ser Ala Ser Ser Pro Ser Leu gct gtc gct tct caa tca gac tcc aag cag cga aga ctt ttg gtt gat 192 Ala Val Ala Ser Gln Ser Asp Ser Lys Gln Arg Arg Leu Leu Val Asp 50 240 ttt cca aaa ggc tca gta agc aat gcg cag cag cca gat ctg tcc aaa Phe Pro Lys Gly Ser Val Ser Asn Ala Gln Gln Pro Asp Leu Ser Lys 65 70 gca gtt tca ctc tca atg gga ctg tat atg gga gag aca gaa aca aaa 288 Ala Val Ser Leu Ser Met Gly Leu Tyr Met Gly Glu Thr Glu Thr Lys 85 gtg atg gga aat gac ctg gga ttc cca cag cag ggc caa atc agc ctt 336 Val Met Gly Asn Asp Leu Gly Phe Pro Gln Gln Gly Gln Ile Ser Leu 105

tcc Ser	tcg Ser	ggg Gly 115	gaa Glu	aca Thr	gac Asp	tta Leu	aag Lys 120	ctt Leu	ttg Leu	gaa Glu	gaa Glu	agc Ser 125	att Ile	gca Ala	aac Asn	384
					agt Ser											432
act Thr 145	gct Ala	gtg Val	tct Ser	gct Ala	gcc Ala 150	ccc Pro	aca Thr	gag Glu	aag Lys	gag Glu 155	ttt Phe	cca Pro	aaa Lys	act Thr	cac His 160	480
					gaa Glu											528
					aaa Lys											576
					gag Glu											624
					aga Arg											672
ctt Leu 225	tct Ser	cct Pro	ctg Leu	gcg Ala	gga Gly 230	gaa Glu	gac Asp	gat Asp	tca Ser	ttc Phe 235	ctt Leu	ttg Leu	gaa Glu	gga Gly	aac Asn 240	720
					aag Lys											768
					gat Asp											816
					aca Thr											864
					caa Gln											912
					aat Asn 310											960
					acc Thr											1008
					tct Ser											1056
					ccc Pro											1104

gga Gly	tct Ser 370	gga Gly	gat Asp	gac Asp	aac Asn	ttg Leu 375	act Thr	tct Ser	ctg Leu	ggg Gly	act Thr 380	ctg Leu	aac Asn	ttc Phe	cct Pro	1152
ggt Gly 385	cga Arg	aca Thr	gtt Val	ttt Phe	tct Ser 390	aat Asn	ggc Gly	tat Tyr	tca Ser	agc Ser 395	ccc Pro	agc Ser	atg Met	aga Arg	cca Pro 400	1200
gat Asp	gta Val	agc Ser	tct Ser	cct Pro 405	cca Pro	tcc Ser	agc Ser	tcc Ser	tca Ser 410	aca Thr	gca Ala	aca Thr	aca Thr	gga Gly 415	cca Pro	1248
cct Pro	ccc Pro	aaa Lys	ctc Leu 420	tgc Cys	ctg Leu	gtg Val	tgc Cys	tct Ser 425	gat Asp	gaa Glu	gct Ala	tca Ser	gga Gly 430	tgt Cys	cat His	1296
tat Tyr	gga Gly	gtc Val 435	tta Leu	act Thr	tgt Cys	gga Gly	agc Ser 440	tgt Cys	aaa Lys	gtt Val	ttc Phe	ttc Phe 445	aaa Lys	aga Arg	gca Ala	1344
gtg Val	gaa Glu 450	gga Gly	cag Gln	cac His	aat Asn	tac Tyr 455	cta Leu	tgt Cys	gct Ala	gga Gly	agg Arg 460	aat Asn	gat Asp	tgc Cys	atc Ile	1392
atc Ile 465	gat Asp	aaa Lys	att Ile	cga Arg	aga Arg 470	aaa Lys	aac Asn	tgc Cys	cca Pro	gca Ala 475	tgc Cys	cgc Arg	tat Tyr	cga Arg	aaa Lys 480	1440
tgt Cys	ctt Leu	cag Gln	gct Ala	gga Gly 485	atg Met	aac Asn	ctg Leu	gaa Glu	gct Ala 490	cga Arg	aaa Lys	aca Thr	aag Lys	aaa Lys 495	aaa Lys	1488
ata Ile	aaa Lys	gga Gly	att Ile 500	cag Gln	cag Gln	gcc Ala	act Thr	aca Thr 505	gga Gly	gtc Val	tca Ser	caa Gln	gaa Glu 510	acc Thr	tct Ser	1536
gaa Glu	aat Asn	cct Pro 515	ggt Gly	aac Asn	aaa Lys	aca Thr	ata Ile 520	gtt Val	cct Pro	gca Ala	acg Thr	tta Leu 525	cca Pro	caa Gln	ctc Leu	1584
acc Thr	cct Pro 530	acc Thr	ctg Leu	gtg Val	tca Ser	ctg Leu 535	ttg Leu	gag Glu	gtt Val	att Ile	gaa Glu 540	cct Pro	gaa Glu	gtg Val	tta Leu	1632
tat Tyr 545	gca Ala	gga Gly	tat Tyr	gat Asp	agc Ser 550	tct Ser	gtt Val	cca Pro	gac Asp	tca Ser 555	act Thr	tgg Trp	agg Arg	atc Ile	atg Met 560	1680
act Thr	acg Thr	ctc Leu	aac Asn	atg Met 565	tta Leu	gga Gly	ggg Gly	cgg Arg	caa Gln 570	gtg Val	att Ile	gca Ala	gca Ala	gtg Val 575	aaa Lys	1728
tgg Trp	gca Ala	aag Lys	gca Ala 580	ata Ile	cca Pro	ggt Gly	ttc Phe	agg Arg 585	aac Asn	tta Leu	cac His	ctg Leu	gat Asp 590	gac Asp	caa Gln	1776
atg Met	acc Thr	cta Leu 595	ctg Leu	cag Gln	tac Tyr	tcc Ser	tgg Trp 600	atg Met	ttt Phe	ctt Leu	atg Met	gca Ala 605	ttt Phe	gct Ala	ctg Leu	1824
Gly ggg	tgg Trp 610	aga Arg	tca Ser	tat Tyr	aga Arg	caa Gln 615	tca Ser	agt Ser	gca Ala	aac Asn	ctg Leu 620	ctg Leu	tgt Cys	ttt Phe	gct Ala	1872
									3	i						

cct gat ctg a Pro Asp Leu I 625	le Ile											1920
gac caa tgt a Asp Gln Cys L												1968
cag gta tct t Gln Val Ser T 6	at gaa Yr Glu 660	gag tat Glu Tyr	ctc Leu	tgt Cys 665	atg Met	aaa Lys	acc Thr	tta Leu	ctg Leu 670	ctt Leu	ctc Leu	2016
tct tca gtt c Ser Ser Val P 675												2064
att aga atg a Ile Arg Met T 690												2112
gaa gga aac t Glu Gly Asn S 705	Ser Ser											2160
ctc ttg gat t Leu Leu Asp S												2208
ttc caa aca t Phe Gln Thr P 7												2256
tta gct gaa a Leu Ala Glu I 755												2304
atc aaa aaa c Ile Lys Lys L 770	_			_	tga *							2334
<210> 2 <211> 777 <212> PRT <213> Homo Sa	piens											
<400> 2 Met Asp Ser L	ys Glu	Ser Leu	Thr	Pro	Gly	Arg	Glu	Glu	Asn	Pro	Ser	
1 Ser Val Leu A		Glu Arg	Gly		10 Val	Met	Asp	Phe		15 Lys	Thr	
Leu Arg Gly G 35	0 Sly Ala	Thr Val	Lys 40	25 Val	Ser	Ala	Ser	Ser 45	30 Pro	Ser	Leu	
Ala Val Ala S	Ser Gln	Ser Asp		Lys	Gln	Arg	Arg 60		Leu	Val	Asp	
Phe Pro Lys G		Val Ser 70	Asn	Ala	Gln	Gln 75	Pro	Asp	Leu	Ser	Lys 80	
Ala Val Ser L	85				90					95		
_	.00			105					110			
Ser Ser Gly G 115			120					125				
Leu Asn Arg S	Ser Thr	Ser Val	Pro	Glu	Asn	Pro	Lys	Ser	Ser	Ala	Ser	

Thr Ala Val Ser Ala Ala Pro Thr Glu Lys Glu Phe Pro Lys Thr His Ser Asp Val Ser Ser Glu Gln Gln His Leu Lys Gly Gln Thr Gly Thr Asn Gly Gly Asn Val Lys Leu Tyr Thr Thr Asp Gln Ser Thr Phe Asp Ile Leu Gln Asp Leu Glu Phe Ser Ser Gly Ser Pro Gly Lys Glu Thr Asn Glu Ser Pro Trp Arg Ser Asp Leu Leu Ile Asp Glu Asn Cys Leu Leu Ser Pro Leu Ala Gly Glu Asp Asp Ser Phe Leu Leu Glu Gly Asn Ser Asn Glu Asp Cys Lys Pro Leu Ile Leu Pro Asp Thr Lys Pro Lys Ile Lys Asp Asn Gly Asp Leu Val Leu Ser Ser Pro Ser Asn Val Thr Leu Pro Gln Val Lys Thr Glu Lys Glu Asp Phe Ile Glu Leu Cys Thr Pro Gly Val Ile Lys Gln Glu Lys Leu Gly Thr Val Tyr Cys Gln Ala Ser Phe Pro Gly Ala Asn Ile Ile Gly Asn Lys Met Ser Ala Ile Ser Val His Gly Val Ser Thr Ser Gly Gly Gln Met Tyr His Tyr Asp Met Asn Thr Ala Ser Leu Ser Gln Gln Gln Asp Gln Lys Pro Ile Phe Asn Val Ile Pro Pro Ile Pro Val Gly Ser Glu Asn Trp Asn Arg Cys Gln Gly Ser Gly Asp Asp Asn Leu Thr Ser Leu Gly Thr Leu Asn Phe Pro Gly Arg Thr Val Phe Ser Asn Gly Tyr Ser Ser Pro Ser Met Arg Pro Asp Val Ser Ser Pro Pro Ser Ser Ser Ser Thr Ala Thr Thr Gly Pro Pro Pro Lys Leu Cys Leu Val Cys Ser Asp Glu Ala Ser Gly Cys His Tyr Gly Val Leu Thr Cys Gly Ser Cys Lys Val Phe Phe Lys Arg Ala Val Glu Gly Gln His Asn Tyr Leu Cys Ala Gly Arg Asn Asp Cys Ile Ile Asp Lys Ile Arg Arg Lys Asn Cys Pro Ala Cys Arg Tyr Arg Lys Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys Lys Ile Lys Gly Ile Gln Gln Ala Thr Thr Gly Val Ser Gln Glu Thr Ser Glu Asn Pro Gly Asn Lys Thr Ile Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp Met Phe Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr Val Ser Ser Glu Leu His Arg Leu

Gln	Val	Ser	Tyr 660	645 Glu	Glu	Tyr	Leu	Cys 665	650 Met	Lys	Thr	Leu	Leu 670	655 Leu		
Ser	Ser			Lys	Asp	Gly			Ser	Gln	Glu			Asp	Glu	
Ile	Arg 690	675 Met	Thr	Tyr	Ile	Lys 695	680 Glu	Leu	Gly	Lys	Ala 700	685 Ile	Val	Lys	Arg	
Glu 705		Asn	Ser	Ser	Gln 710		Trp	Gln	Arg	Phe 715		Gln	Leu	Thr	Lys 720	
	Leu	Asp	Ser	Met 725		Glu	Val	Val	Glu 730		Leu	Leu	Asn	Tyr 735		
Phe	Gln	Thr	Phe 740	Leu	Asp	Lys	Thr	Met 745		Ile	Glu	Phe	Pro 750		Met	
Leu	Ala	Glu 755		Ile	Thr	Asn	Gln 760	Ile	Pro	Lys	Tyr	Ser 765		Gly	Asn	
Ile	Lys 770		Leu	Leu	Phe	His 775		Lys				703				
<210> 3 <211> 2334 <212> DNA <213> Homo Sapiens																
	l> CI		. (233	34)												
<400	0> 3															
				gaa Glu 5												48
				cag Gln												96
cta Leu	aga Arg	gga Gly 35	gga Gly	gct Ala	act Thr	gtg Val	aag Lys 40	gtt Val	tct Ser	gcg Ala	tct Ser	tca Ser 45	ccc Pro	tca Ser	ctg Leu	144
				caa Gln												192
				tca Ser												240
gca Ala	gtt Val	tca Ser	ctc Leu	tca Ser 85	atg Met	gga Gly	ctg Leu	tat Tyr	atg Met 90	gga Gly	gag Glu	aca Thr	gaa Glu	aca Thr 95	aaa Lys	288
				gac Asp												336
				aca Thr												384
				acc Thr												432

					gcc Ala 150											480
					gaa Glu											528
					aaa Lys											576
att Ile	ttg Leu	cag Gln 195	gat Asp	ttg Leu	gag Glu	ttt Phe	tct Ser 200	tct Ser	ggg Gly	tcc Ser	cca Pro	ggt Gly 205	aaa Lys	gag Glu	acg Thr	624
					aga Arg											672
ctt Leu 225	tct Ser	cct Pro	ctg Leu	gcg Ala	gga Gly 230	gaa Glu	gac Asp	gat Asp	tca Ser	ttc Phe 235	ctt Leu	ttg Leu	gaa Glu	gga Gly	aac Asn 240	720
tcg Ser	aat Asn	gag Glu	gac Asp	tgc Cys 245	aag Lys	cct Pro	ctc Leu	att Ile	tta Leu 250	ccg Pro	gac Asp	act Thr	aaa Lys	ccc Pro 255	aaa Lys	768
att Ile	aag Lys	gat Asp	aat Asn 260	gga Gly	gat Asp	ctg Leu	gtt Val	ttg Leu 265	tca Ser	agc Ser	ccc Pro	agt Ser	aat Asn 270	gta Val	aca Thr	816
					aca Thr											864
					caa Gln											912
					aat Asn 310											960
gtt Val	cat His	ggt Gly	gtg Val	agt Ser 325	acc Thr	tct Ser	gga Gly	gga Gly	cag Gln 330	atg Met	tac Tyr	cac His	tat Tyr	gac Asp 335	atg Met	1008
aat Asn	aca Thr	gca Ala	tcc Ser 340	ctt Leu	tct Ser	caa Gln	cag Gln	cag Gln 345	gat Asp	cag Gln	aag Lys	cct Pro	att Ile 350	ttt Phe	aat Asn	1056
					ccc Pro											1104
gga Gly	tct Ser 370	gga Gly	gat Asp	gac Asp	aac Asn	ttg Leu 375	act Thr	tct Ser	ctg Leu	ggg Gly	act Thr 380	ctg Leu	aac Asn	ttc Phe	cct Pro	1152
ggt Gly 385	cga Arg	aca Thr	gtt Val	ttt Phe	tct Ser 390	aat Asn	ggc Gly	tat Tyr	tca Ser	agc Ser 395	ccc Pro	agc Ser	atg Met	aga Arg	cca Pro 400	1200

gat gta agc tct Asp Val Ser Ser	cct cca tcc Pro Pro Ser 405	agc tcc tca Ser Ser Ser 410	aca gca aca Thr Ala Thr	aca gga cca Thr Gly Pro 415	1248
cct ccc aaa ctc Pro Pro Lys Leu 420	tgc ctg gtg Cys Leu Val	tgc tct gat Cys Ser Asp 425	Glu Ala Ser	gga tgt cat Gly Cys His 430	1296
tat gga gtc tta Tyr Gly Val Leu 435	act tgt gga Thr Cys Gly	agc tgt aaa Ser Cys Lys 440	gtt ttc ttc Val Phe Phe 445	aaa aga gca Lys Arg Ala	1344
gtg gaa gga cag Val Glu Gly Gln 450	cac aat tac His Asn Tyr 455	cta tgt gct Leu Cys Ala	gga agg aat Gly Arg Asn 460	gat tgc atc Asp Cys Ile	1392
atc gat aaa att Ile Asp Lys Ile 465	cga aga aaa Arg Arg Lys 470	aac tgc cca Asn Cys Pro	gca tgc cgc Ala Cys Arg 475	tat cga aaa Tyr Arg Lys 480	1440
tgt ctt cag gct Cys Leu Gln Ala	gga atg aac Gly Met Asn 485	ctg gaa gct Leu Glu Ala 490	cga aaa aca Arg Lys Thr	aag aaa aaa Lys Lys Lys 495	1488
ata aaa gga att Ile Lys Gly Ile 500	cag cag gcc Gln Gln Ala	act aca gga Thr Thr Gly 505	Val Ser Gln	gaa acc tct Glu Thr Ser 510	1536
gaa aat cct ggt Glu Asn Pro Gly 515	aac aaa aca Asn Lys Thr	ata gtt cct Ile Val Pro 520	gca acg tta Ala Thr Leu 525	cca caa ctc Pro Gln Leu	1584
acc cct acc ctg Thr Pro Thr Leu 530	gtg tca ctg Val Ser Leu 535	ttg gag gtt Leu Glu Val	att gaa cct Ile Glu Pro 540	gaa gtg tta Glu Val Leu	1632
tat gca gga tat Tyr Ala Gly Tyr 545	gat agc tct Asp Ser Ser 550	gtt cca gac Val Pro Asp	tca act tgg Ser Thr Trp 555	agg atc atg Arg Ile Met 560	1680
act acg ctc aac Thr Thr Leu Asn	atg tta gga Met Leu Gly 565	ggg cgg caa Gly Arg Gln 570	gtg att gca Val Ile Ala	gca gtg aaa Ala Val Lys 575	1728
tgg gca aag gca Trp Ala Lys Ala 580	ata cca ggt Ile Pro Gly	ttc agg aac Phe Arg Asn 585	Leu His Leu	gat gac caa Asp Asp Gln 590	1776
atg acc cta ctg Met Thr Leu Leu 595	cag tac tcc Gln Tyr Ser	tgg atg tcc Trp Met Ser 600	ctt atg gca Leu Met Ala 605	ttt gct ctg Phe Ala Leu	1824
ggg tgg aga tca Gly Trp Arg Ser 610	tat aga caa Tyr Arg Gln 615	tca agt gca Ser Ser Ala	aac ctg ctg Asn Leu Leu 620	tgt ttt gct Cys Phe Ala	1872
cct gat ctg att Pro Asp Leu Ile 625	att aat gag Ile Asn Glu 630	cag aga atg Gln Arg Met	act cta ccc Thr Leu Pro 635	tgc atg tac Cys Met Tyr 640	1920
gac caa tgt aaa Asp Gln Cys Lys	cac atg ctg His Met Leu 645	tat gtt tcc Tyr Val Ser 650	Ser Glu Leu	cac agg ctt His Arg Leu 655	1968

cag gta tct tat gaa gag tat ctc tgt atg aaa acc tta ctg ctt ctc Gln Val Ser Tyr Glu Glu Tyr Leu Cys Met Lys Thr Leu Leu Leu 660 665 670	2016
tct tca gtt cct aag gac ggt ctg aag agc caa gag cta ttt gat ga: Ser Ser Val Pro Lys Asp Gly Leu Lys Ser Gln Glu Leu Phe Asp Gl 675 680 685	a 2064 1
att aga atg acc tac atc aaa gag cta gga aaa gcc att gtc aag agg Ile Arg Met Thr Tyr Ile Lys Glu Leu Gly Lys Ala Ile Val Lys Arg 690 695 700	g 2112 g
gaa gga aac tcc agc cag aac tgg cag cgg ttt tat caa ctg aca aac Glu Gly Asn Ser Ser Gln Asn Trp Gln Arg Phe Tyr Gln Leu Thr Ly: 705 710 715 726	5
ctc ttg gat tct atg cat gaa gtg gtt gaa aat ctc ctt aac tat tgc Leu Leu Asp Ser Met His Glu Val Val Glu Asn Leu Leu Asn Tyr Cys 725 730 735	2208
ttc caa aca ttt ttg gat aag acc atg agt att gaa ttc ccc gag atg Phe Gln Thr Phe Leu Asp Lys Thr Met Ser Ile Glu Phe Pro Glu Met 740 745 750	g 2256
tta gct gaa atc atc acc aat cag ata cca aaa tat tca aat gga aa Leu Ala Glu Ile Ile Thr Asn Gln Ile Pro Lys Tyr Ser Asn Gly As 755 760 765	
atc aaa aaa ctt ctg ttt cat caa aag tga Ile Lys Lys Leu Leu Phe His Gln Lys * 770 775	2334
<210> 4 <211> 777 <212> PRT <213> Homo Sapiens	
<211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Ser	c
<pre><211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	
<pre><211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	r
<pre><211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	r 1
<pre> <211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	c 1 2
<pre><211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	c 1 2
<pre> <211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	c 1 2 5 5
<pre> <211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set</pre>	c 1 2 5 5
<pre> <211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	
<pre> <211> 777 <212> PRT <213> Homo Sapiens </pre> <pre> <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	
<pre> <211> 777 <212> PRT <213> Homo Sapiens <400> 4 Met Asp Ser Lys Glu Ser Leu Thr Pro Gly Arg Glu Glu Asn Pro Set 1</pre>	

Ile Leu Gln Asp Leu Glu Phe Ser Ser Gly Ser Pro Gly Lys Glu Thr Asn Glu Ser Pro Trp Arg Ser Asp Leu Leu Ile Asp Glu Asn Cys Leu Leu Ser Pro Leu Ala Gly Glu Asp Asp Ser Phe Leu Leu Glu Gly Asn Ser Asn Glu Asp Cys Lys Pro Leu Ile Leu Pro Asp Thr Lys Pro Lys Ile Lys Asp Asn Gly Asp Leu Val Leu Ser Ser Pro Ser Asn Val Thr Leu Pro Gln Val Lys Thr Glu Lys Glu Asp Phe Ile Glu Leu Cys Thr Pro Gly Val Ile Lys Gln Glu Lys Leu Gly Thr Val Tyr Cys Gln Ala Ser Phe Pro Gly Ala Asn Ile Ile Gly Asn Lys Met Ser Ala Ile Ser Val His Gly Val Ser Thr Ser Gly Gly Gln Met Tyr His Tyr Asp Met Asn Thr Ala Ser Leu Ser Gln Gln Gln Asp Gln Lys Pro Ile Phe Asn Val Ile Pro Pro Ile Pro Val Gly Ser Glu Asn Trp Asn Arg Cys Gln Gly Ser Gly Asp Asp Asn Leu Thr Ser Leu Gly Thr Leu Asn Phe Pro Gly Arg Thr Val Phe Ser Asn Gly Tyr Ser Ser Pro Ser Met Arg Pro Asp Val Ser Ser Pro Pro Ser Ser Ser Ser Thr Ala Thr Thr Gly Pro Pro Pro Lys Leu Cys Leu Val Cys Ser Asp Glu Ala Ser Gly Cys His Tyr Gly Val Leu Thr Cys Gly Ser Cys Lys Val Phe Phe Lys Arg Ala Val Glu Gly Gln His Asn Tyr Leu Cys Ala Gly Arg Asn Asp Cys Ile Ile Asp Lys Ile Arg Arg Lys Asn Cys Pro Ala Cys Arg Tyr Arg Lys Cys Leu Gln Ala Gly Met Asn Leu Glu Ala Arg Lys Thr Lys Lys Ile Lys Gly Ile Gln Gln Ala Thr Thr Gly Val Ser Gln Glu Thr Ser Glu Asn Pro Gly Asn Lys Thr Ile Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp Met Ser Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu Cys Met Lys Thr Leu Leu Leu Ser Ser Val Pro Lys Asp Gly Leu Lys Ser Gln Glu Leu Phe Asp Glu Ile Arg Met Thr Tyr Ile Lys Glu Leu Gly Lys Ala Ile Val Lys Arg

715 710 Leu Leu Asp Ser Met His Glu Val Val Glu Asn Leu Leu Asn Tyr Cys 725 730 Phe Gln Thr Phe Leu Asp Lys Thr Met Ser Ile Glu Phe Pro Glu Met 740 745 750 Leu Ala Glu Ile Ile Thr Asn Gln Ile Pro Lys Tyr Ser Asn Gly Asn 755 760 Ile Lys Lys Leu Leu Phe His Gln Lys <210> 5 <211> 774 <212> DNA <213> Homo sapiens <220> <221> CDS <222> (1)...(774) <400> 5 gtt cct gca acg tta cca caa ctc acc cct acc ctg gtg tca ctg ttg Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu 96 gag gtt att gaa cct gaa gtg tta tat gca gga tat gat agc tct gtt Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val cca gac tca act tgg agg atc atg act acg ctc aac atg tta gga ggg 144 Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly 192 cgg caa gtg att gca gca gtg aaa tgg gca aag gca ata cca ggt ttc Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe 55 240 agg aac tta cac ctg gat gac caa atg acc cta ctg cag tac tcc tgg Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp 75 288 atg ttt ctt atg gca ttt gct ctg ggg tgg aga tca tat aga caa tca Met Phe Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser 85 336 agt gca aac ctg ctg tgt ttt gct cct gat ctg att att aat gag cag Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln 100 105 384 aga atg act cta ccc tgc atg tac gac caa tgt aaa cac atg ctg tat Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr 115 gtt tcc tct gag tta cac agg ctt cag gta tct tat gaa gag tat ctc 432 Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu 130 135 480 tgt atg aaa acc tta ctg ctt ctc tct tca gtt cct aag gac ggt ctg Cys Met Lys Thr Leu Leu Leu Ser Ser Val Pro Lys Asp Gly Leu 145 150 155 aag agc caa gag cta ttt gat gaa att aga atg acc tac atc aaa gag Lys Ser Gln Glu Leu Phe Asp Glu Ile Arg Met Thr Tyr Ile Lys Glu

Glu Gly Asn Ser Ser Gln Asn Trp Gln Arg Phe Tyr Gln Leu Thr Lys

cta gga aaa gcc att gtc aag agg gaa gga aac tcc agc cag aac tgg Leu Gly Lys Ala Ile Val Lys Arg Glu Gly Asn Ser Ser Gln Asn Trp cag cgg ttt tat caa ctg aca aaa ctc ttg gat tct atg cat gaa gtg Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Met His Glu Val gtt gaa aat ctc ctt aac tat tgc ttc caa aca ttt ttg gat aag acc Val Glu Asn Leu Leu Asn Tyr Cys Phe Gln Thr Phe Leu Asp Lys Thr atg agt att gaa ttc ccc gag atg tta gct gaa atc atc acc aat cag Met Ser Ile Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn Gln ata cca aaa tat tca aat gga aat atc aaa aaa ctt ctg ttt cat caa Ile Pro Lys Tyr Ser Asn Gly Asn Ile Lys Lys Leu Leu Phe His Gln aag tga Lys

<210> 6 <211> 257

<212> PRT

<213> Homo sapiens

<400> 6 Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val 2.0 Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp Met Phe Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu Cys Met Lys Thr Leu Leu Leu Ser Ser Val Pro Lys Asp Gly Leu Lys Ser Gln Glu Leu Phe Asp Glu Ile Arg Met Thr Tyr Ile Lys Glu Leu Gly Lys Ala Ile Val Lys Arg Glu Gly Asn Ser Ser Gln Asn Trp Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Met His Glu Val Val Glu Asn Leu Leu Asn Tyr Cys Phe Gln Thr Phe Leu Asp Lys Thr Met Ser Ile Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn Gln Ile Pro Lys Tyr Ser Asn Gly Asn Ile Lys Lys Leu Leu Phe His Gln

245 250 255

Lys

<210> 7 <211> 774 <212> DNA <213> Homo sapiens																
<22	<220> <221> CDS <222> (1)(774)															
gtt					cca Pro											48
gag Glu	gtt Val	att Ile	gaa Glu 20	cct Pro	gaa Glu	gtg Val	tta Leu	tat Tyr 25	gca Ala	gga Gly	tat Tyr	gat Asp	agc Ser 30	tct Ser	gtt Val	96
					agg Arg											144
					gca Ala											192
					gat Asp 70											240
					ttt Phe											288
					tgt Cys											336
					tgc Cys											384
					cac His		Leu			Ser						432
					ctg Leu 150											480
					ttt Phe											528
					gtc Val											576
cag	cgg	ttt	tat	caa	ctg	aca	aaa	ctc	ttg	gat	tct	atg	cat	gaa	gtg	624

```
Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Met His Glu Val
       195
                            200
gtt gaa aat ctc ctt aac tat tgc ttc caa aca ttt ttg gat aag acc
                                                                   672
Val Glu Asn Leu Leu Asn Tyr Cys Phe Gln Thr Phe Leu Asp Lys Thr
                        215
                                            220
                                                                   720
atg agt att gaa ttc ccc gag atg tta gct gaa atc acc aat cag
Met Ser Ile Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn Gln
                    230
                                                                   768
ata cca aaa tat tca aat gga aat atc aaa aaa ctt ctg ttt cat caa
Ile Pro Lys Tyr Ser Asn Gly Asn Ile Lys Lys Leu Leu Phe His Gln
                                    250
aag tga
                                                                   774
Lys *
<210> 8
<211> 257
<212> PRT
<213> Homo sapiens
<400> 8
Val Pro Ala Thr Leu Pro Gln Leu Thr Pro Thr Leu Val Ser Leu Leu
1
                - 5
                                    10
Glu Val Ile Glu Pro Glu Val Leu Tyr Ala Gly Tyr Asp Ser Ser Val
                                25
                                                    30
            20
Pro Asp Ser Thr Trp Arg Ile Met Thr Thr Leu Asn Met Leu Gly Gly
       35
                            40
Arg Gln Val Ile Ala Ala Val Lys Trp Ala Lys Ala Ile Pro Gly Phe
                        55
Arg Asn Leu His Leu Asp Asp Gln Met Thr Leu Leu Gln Tyr Ser Trp
                    70
                                        75
Met Ser Leu Met Ala Phe Ala Leu Gly Trp Arg Ser Tyr Arg Gln Ser
                                                        95
               85
                                    90
Ser Ala Asn Leu Leu Cys Phe Ala Pro Asp Leu Ile Ile Asn Glu Gln
                                105
           100
                                                    110
Arg Met Thr Leu Pro Cys Met Tyr Asp Gln Cys Lys His Met Leu Tyr
                            120
                                               125
       115
Val Ser Ser Glu Leu His Arg Leu Gln Val Ser Tyr Glu Glu Tyr Leu
                       135
                                            140
Cys Met Lys Thr Leu Leu Leu Ser Ser Val Pro Lys Asp Gly Leu
                   150
                                        155
                                                            160
Lys Ser Gln Glu Leu Phe Asp Glu Ile Arg Met Thr Tyr Ile Lys Glu
                                    170
                                                        175
               165
Leu Gly Lys Ala Ile Val Lys Arg Glu Gly Asn Ser Ser Gln Asn Trp
                                185
                                                    190
Gln Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Met His Glu Val
                            200
                                                205
       195
Val Glu Asn Leu Leu Asn Tyr Cys Phe Gln Thr Phe Leu Asp Lys Thr
                        215
                                            220
Met Ser Ile Glu Phe Pro Glu Met Leu Ala Glu Ile Ile Thr Asn Gln
                   230
                                        235
Ile Pro Lys Tyr Ser Asn Gly Asn Ile Lys Lys Leu Leu Phe His Gln
                                    250
               245
Lys
```

```
<213> Homo sapiens
<400> 9
Lys Glu Asn Ala Leu Leu Arg Tyr Leu Leu Asp Lys Asp Asp
<210> 10
<211> 5
<212> PRT
<213> Homo sapeins
<220>
<221> VARIANT
<222> (1)...(5)
<223> Xaa = Any Amino Acid
<400> 10
Leu Xaa Xaa Leu Leu
<210> 11
<211> 6
<212> PRT
<213> Homo sapiens
<400> 11
Leu Leu Arg Tyr Leu Leu
                 5
<210> 12
<211> 252
<212> PRT
<213> Homo sapiens
<400> 12
Ala Leu Thr Pro Ser Pro Val Met Val Leu Glu Asn Ile Glu Pro Glu
Ile Val Tyr Ala Gly Tyr Asp Ser Ser Lys Pro Asp Thr Ala Glu Asn
                                25
Leu Leu Ser Thr Leu Asn Arg Leu Ala Gly Lys Gln Met Ile Gln Val
Val Lys Trp Ala Lys Val Leu Pro Gly Phe Lys Asn Leu Pro Leu Glu
                       55
                                            60
Asp Gln Ile Thr Leu Ile Gln Tyr Ser Trp Met Cys Leu Ser Ser Phe
                    70
                                        75
65
Ala Leu Ser Trp Arg Ser Tyr Lys His Thr Asn Ser Gln Phe Leu Tyr
                85
                                    90
                                                         95
Phe Ala Pro Asp Leu Val Phe Asn Glu Glu Lys Met His Gln Ser Ala
            100
                                105
                                                    110
Met Tyr Glu Leu Cys Gln Gly Met His Gln Ile Ser Leu Gln Phe Val
                            120
Arg Leu Gln Leu Thr Phe Glu Glu Tyr Thr Ile Met Lys Val Leu Leu
                                            140
                        135
Leu Leu Ser Thr Ile Pro Lys Asp Gly Leu Lys Ser Gln Ala Ala Phe
                    150
                                        155
Glu Glu Met Arg Thr Asn Tyr Ile Lys Glu Leu Arg Lys Met Val Thr
                                                         175
                165
                                    170
Lys Cys Pro Asn Asn Ser Gly Gln Ser Trp Gln Arg Phe Tyr Gln Leu
                               185
Thr Lys Leu Leu Asp Ser Met His Asp Leu Val Ser Asp Leu Leu Glu
```

<212> PRT

```
195
                            200
                                                205
Phe Cys Phe Tyr Thr Phe Arg Glu Ser His Ala Leu Lys Val Glu Phe
                     215
    210
                                           220
Pro Ala Met Leu Val Glu Ile Ile Ser Asp Gln Leu Pro Lys Val Glu
                   230
                                      235
Ser Gly Asn Ala Lys Pro Leu Tyr Phe His Arg Lys
               245
<210> 13
<211> 252
<212> PRT
<213> Homo sapiens
Gln Leu Ile Pro Pro Leu Ile Asn Leu Leu Met Ser Ile Glu Pro Asp
                                    10
Val Ile Tyr Ala Gly His Asp Asn Thr Lys Pro Asp Thr Ser Ser Ser
                                25
           20
Leu Leu Thr Ser Leu Asn Gln Leu Gly Glu Arg Gln Leu Leu Ser Val
                            40
Val Lys Trp Ser Lys Ser Leu Pro Gly Phe Arg Asn Leu His Ile Asp
                        55
                                           60
Asp Gln Ile Thr Leu Ile Gln Tyr Ser Trp Met Ser Leu Met Val Phe
                                        75
Gly Leu Gly Trp Arg Ser Tyr Lys His Val Ser Gly Gln Met Leu Tyr
               85
                                    90
Phe Ala Pro Asp Leu Ile Leu Asn Glu Gln Arg Met Lys Glu Ser Ser
           100
                                105
                                                    110
Phe Tyr Ser Leu Cys Leu Thr Met Trp Gln Ile Pro Gln Glu Phe Val
        115
                            120
                                                125
Lys Leu Gln Val Ser Gln Glu Glu Phe Leu Cys Met Lys Val Leu Leu
                                            140
                        135
Leu Leu Asn Thr Ile Pro Leu Glu Gly Leu Arg Ser Gln Thr Gln Phe
                                        155
                    150
Glu Glu Met Arg Ser Ser Tyr Ile Arg Glu Leu Ile Lys Ala Ile Gly
               165
                                    170
                                                        175
Leu Arg Gln Lys Gly Val Val Ser Ser Gln Arg Phe Tyr Gln Leu
                                                    190
           180
                                185
Thr Lys Leu Leu Asp Asn Leu His Asp Leu Val Lys Gln Leu His Leu
       195
                            200
                                                205
Tyr Cys Leu Asn Thr Phe Ile Gln Ser Arg Ala Leu Ser Val Glu Phe
  210
                       215
                                           220
Pro Glu Met Met Ser Glu Val Ile Ala Ala Gln Leu Pro Lys Ile Leu
                   230
                                        235
Ala Gly Met Val Lys Pro Leu Leu Phe His Lys Lys
               245
<210> 14
<211> 252
<212> PRT
<213> Homo sapiens
<400> 14
Glu Cys Gln Pro Ile Phe Leu Asn Val Leu Glu Ala Ile Glu Pro Gly
                                    10
Val Val Cys Ala Gly His Asp Asn Asn Gln Pro Asp Ser Phe Ala Ala
Leu Leu Ser Ser Leu Asn Glu Leu Gly Glu Arg Gln Leu Val His Val
                            40
                                                45
       35
Val Lys Trp Ala Lys Ala Leu Pro Gly Phe Arg Asn Leu His Val Asp
Asp Gln Met Ala Val Ile Gln Tyr Ser Trp Met Gly Leu Met Val Phe
```

Ala Met Gly Trp Arg Ser Phe Thr Asn Val Asn Ser Arg Met Leu Tyr Phe Ala Pro Asp Leu Val Phe Asn Glu Tyr Arg Met His Lys Ser Arg Met Tyr Ser Gln Cys Val Arg Met Arg His Leu Ser Gln Glu Phe Gly 115 120 125Trp Leu Gln Ile Thr Pro Gln Glu Phe Leu Cys Met Lys Ala Leu Leu Leu Phe Ser Ile Ile Pro Val Asp Gly Leu Lys Asn Gln Lys Phe Phe Asp Glu Leu Arg Met Asn Tyr Ile Lys Glu Leu Asp Arg Ile Ile Ala Cys Lys Arg Lys Asn Pro Thr Ser Cys Ser Arg Arg Phe Tyr Gln Leu Thr Lys Leu Leu Asp Ser Val Gln Pro Ile Ala Arg Glu Leu His Gln Phe Thr Phe Asp Leu Leu Ile Lys Ser His Met Val Ser Val Asp Phe Pro Glu Met Met Ala Glu Ile Ile Ser Val Gln Val Pro Lys Ile Leu Ser Gly Lys Val Lys Pro Ile Tyr Phe His Thr Gln

.